

- three-dimensional copolymers of methacrylonitrile and of at least one crosslinkable comonomer.

2. (Twice Amended) Solid polymer electrolyte according to Claim 1, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of a comonomer which is soluble in solvents with low boiling points.

4. (Twice Amended) Solid polymer electrolyte according to Claim 1, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of at least one acrylic or methacrylic comonomer.

5. (Amended) Solid polymer electrolyte according to Claim 4, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of at least one acrylic comonomer corresponding to the formula $\text{CHX}=\text{CZ}-\text{CO}-\text{V}-\text{Y}$, in which:

- X represents $\text{C}_n\text{H}_{2n+1}$, with $0 \leq n \leq 8$;
- Z represents $\text{C}_n\text{H}_{2n+1}$, with $0 \leq n \leq 8$, or $(\text{CH}_2)_m\text{CN}$, with $0 \leq m \leq 4$;
- V represents O, NH or NR, R represents $\text{C}_n\text{H}_{2n+1}$, with $0 \leq n \leq 8$;
- Y represents a $\text{C}_n\text{H}_{2n+1}$ radical, with $0 \leq n \leq 8$, a radical carrying an oxirane group $\text{C}_n\text{H}_{2n}-(\text{CH}-\text{CH}_2)-\text{O}$, with $1 \leq n \leq 4$, or a radical $[(\text{CH}_2)_m-\text{O}]_p\text{R}'$, in which $m = 2, 3$ or 4, $1 \leq p \leq 50$ and R' represents $\text{C}_n\text{H}_{2n+1}$, with $0 \leq n \leq 8$.

14. (Twice Amended) Solid polymer electrolyte according to Claim 2, wherein the methacrylonitrile polymer is a bipolymer of methacrylonitrile and of a monomer carrying an ionic functional group selected from the group consisting of carboxylate, phosphate, phosphonate, sulfonate and perfluorosulfonate.

is not readable on the selected species

16. (Amended) Solid polymer electrolyte according to Claim 4, wherein the comonomer is glycidyl acrylate or glycidyl methacrylate. ✓

29. (Amended) Process for the bulk preparation of a methacrylonitrile polymer by the radical route, comprising the following stages:

- a thermal-decomposition free-radical initiator is dissolved in methacrylonitrile or a mixture of methacrylonitrile with at least one comonomer,
- the mixture is degassed in order to remove the oxygen and is introduced into a hermetically closed chamber,
- the mixture is brought to a temperature of 60 to 90°C and is maintained at this temperature for 24 to 72 hours.

34. (Amended) Solid polymer electrolyte according to Claim 2, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of at least one acrylic or methacrylic comonomer.

Please add the following new claims 37-39:

--37. (New) Solid polymer electrolyte according to Claim 1, comprising at least one methacrylonitrile polymer chosen from linear homopolymers of high mass which are reinforced or from three-dimensional crosslinked homopolymers which are reinforced.

not elected species

38. (New) Solid polymer electrolyte according to Claim 1, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of a comonomer providing internal plasticization of the polymer by decreasing its glass transition temperature.

39. (New) Solid polymer electrolyte according to Claim 1, wherein the methacrylonitrile polymer is a copolymer of methacrylonitrile and of a comonomer which has an ionic functional group in order to obtain a unipolar electrolyte.